

CLAIMS

We claim:

1. An automated banking machine apparatus comprising:

a cash dispenser;

5 a user interface, wherein the user interface includes at least one input device,
wherein inputs to the at least one input device by users of the apparatus are operative to
cause operation of the cash dispenser;

at least one mirror adjacent to user interface, wherein users of the apparatus when
providing an input to the at least one input device are enabled to observe an area behind
10 such users in the at least one mirror.

2. The apparatus according to claim 1 wherein the at least one mirror is positioned
vertically above the at least one input device.

3. The apparatus according to claim 1 wherein the at least one mirror comprises a
convex mirror.

4. The apparatus according to claim 2 wherein the at least one mirror comprises two horizontally disposed mirrors.

5. The apparatus according to claim 4 wherein the two horizontally disposed mirrors are positioned on opposed sides of the user interface.

5 6. The apparatus according to claim 5 wherein each of the two mirrors comprises a convex mirror.

7. The apparatus according to claim 6 wherein the apparatus comprises an ATM.

8. The apparatus according to claim 7 wherein the ATM comprises a card reader.

9. The apparatus according to claim 8 wherein the ATM comprises a key pad.

10 10. The apparatus according to claim 9 wherein the ATM comprises a display.

11. The apparatus according to claim 10 wherein the user interface comprises a light and wherein the mirrors are disposed outward of the user interface so as to be closer to users than the light.

12. The apparatus according to claim 11 wherein each of the two mirrors is disposed horizontally transversely of the light.

13. The apparatus according to claim 10 and further comprising at least one controller in operative connection with the cash dispenser, keypad, card reader and display.

5 14. The apparatus according to claim 13 and further comprising at least one sensor in operative connection with the at least one controller, wherein the at least one sensor is operative to sense radiation which is at least one of reflected from and transmitted through at least one mirror, and wherein the at least one controller is operative to determine responsive to radiation sensed by the at least one sensor when the at least one mirror requires cleaning.

10 15. The apparatus according to claim 14 wherein the at least one controller is operative to generate at least one signal responsive to determining the at least one mirror requires cleaning.

16. The apparatus according to claim 15 wherein the at least one signal is operative to cause a remote servicer to be contacted.

15 17. The apparatus according to claim 16 and further comprising a mirror cleaning device in operative connection with the at least one controller, and wherein the at least one signal is operative to cause the mirror cleaning device to operate to clean the at least one mirror.

18. The apparatus according to claim 17 wherein the at least one controller is further operative generally immediately after operating the mirror cleaning device to further determine responsive to radiation sensed by the at least one sensor, whether the at least one mirror still requires cleaning, and responsive to determining that the at least one mirror still requires cleaning,
5 the at least one controller is operative to output at least one further signal, wherein the at least one further signal is operative to cause a remote servicer to be contacted.

19. The apparatus according to claim 17 wherein the mirror cleaning device is operative to apply a solvent to at least one mirror.

20. The apparatus according to claim 13 and further comprising at least one light in
10 operative connection with the at least one controller, wherein the at least one light directs illumination in the area behind users of the machine, wherein ability of nonusers in the area to observe inputs by users is reduced.

21. The apparatus according to claim 20 wherein the at least one controller is operative to cause the at least one light to illuminate responsive to a user input to the keypad.

22. The apparatus according to claim 20 and further comprising at least one user sensor
15 operative to sense a user adjacent to the machine, wherein the at least one user sensor is in operative connection with the at least one controller, and wherein the at least one controller is

operative to cause the at least one light to illuminate responsive to a user being sensed adjacent to the machine.

23. The apparatus according to claim 1 and further comprising:

at least one sensor adapted to sense radiation that is at least one of transmitted

through and reflected from the at least one mirror;

at least one controller in operative connection with the at least one sensor;

wherein the at least one controller is operative to determine that the at least one mirror requires cleaning responsive to radiation sensed by the at least one sensor.

24. The apparatus according to claim 23 and further comprising a mirror cleaning

device in operative connection with the at least one controller, and wherein the controller responsive to determining that the at least one mirror requires cleaning, is operative to cause the mirror cleaning device to operate to clean the at least one mirror.

25. The apparatus according to claim 24 wherein the at least one controller is further operative responsive to radiation sensed by the at least one sensor to determine that the at least one

mirror requires cleaning after the mirror cleaning device has operated, and responsive to such determination the at least one controller is operative to generate at least one signal.

26. The apparatus according to claim 25 wherein the at least one signal is operative to cause a remote servicer to be contacted.

5 27. The apparatus according to claim 1 and further comprising at least one controller in operative connection with the cash dispenser and at least one input device, and further comprising a movement mechanism operative to move at least one mirror, wherein the movement mechanism is in operative connection with the at least one controller, and wherein the at least one controller is operative to cause the movement mechanism to move the at least one mirror to at least one position
10 wherein users of the machine are enabled to observe the area.

28. The apparatus according to claim 27 wherein the at least one controller is operative to cause the at least one mirror to move to the at least one position responsive to at least one input to the at least one input device.

15 29. The apparatus according to claim 27 and further comprising at least one user sensor operative to sense a user adjacent to the machine, and wherein the at least one user sensor is in operative connection with the at least one controller, and wherein the at least one controller is

operative to cause the at least one mirror to move to the at least one position responsive to the at least one user sensor sensing a user adjacent to the machine.

30. The apparatus according to claim 27 and further comprising at least one cleaning device, wherein the at least one cleaning device is operative to clean the at least one mirror as the at least one mirror is moved responsive to the movement mechanism.

31. A method comprising:

with an automated banking machine including a cash dispenser and a user interface, wherein the user interface includes at least one input device and wherein the machine includes at least one controller, at least one mirror and at least one radiation sensor;

- (a) sensing radiation with the at least one radiation sensor that is at least one of transmitted through and reflected from the at least one mirror;
- (b) responsive to the sensed radiation in (a) determining whether the at least one mirror requires cleaning through operation of the at least one controller.

32. The method according to claim 31 wherein the at least one mirror enables passage therethrough of radiation that is sensed by the at least one sensor, and wherein (a) includes sensing radiation reflected from an internal surface of the at least one mirror.

5 33. The method according to claim 31 wherein the at least one mirror enables the passage of radiation therethrough that is sensed by the at least one sensor, and wherein (a) includes sensing radiation transmitted through the at least one mirror.

34. The method according to claim 32 wherein the at least one mirror enables passage of radiation therethrough that is sensed by the at least one sensor, and wherein (a) includes sensing radiation transmitted through the at least one mirror.

10 35. The method according to claim 31 and further comprising prior to (b):

sensing ambient radiation outside the machine through operation of an ambient light sensor, wherein the determination in (b) is further made responsive to radiation sensed by the ambient light sensor.

36. The method according to claim 31 and further comprising:

- (c) responsive to the determination in (b) that the mirror requires cleaning, operating a mirror cleaning device on the machine to endeavor to clean the at least one mirror.

37. The method according to claim 36 and subsequent to (c) repeating (a) and (b).

5 38. The method according to claim 37 and responsive to determining in the repeated step (b) that the at least one mirror still requires cleaning, operating the at least one controller to cause a remote servicer to be contacted.

39. The method according to claim 31 and further comprising:

- (c) moving at least one mirror to at least one position responsive to operation of the at least one controller, wherein in the at least one position a user operating the machine is enabled to observe an area behind the user.

40. The method according to claim 39 and prior to (c),

- (d) sensing a user adjacent to the machine with at least one user sensor in operative connection with the at least one controller;

wherein (c) is carried out responsive to sensing a user adjacent to the machine in (d).

41. The method according to claim 39 and further comprising:

(d) sensing through operation of the at least one controller at least one input to the at least one input device,

wherein (c) is carried out responsive to the controller sensing the at least one input in (d).

42. The method according to claim 40 and prior to (c) and responsive to (d) determining through operation of the at least one controller if a user adjacent to a machine is in a vehicle, and not carrying out (c) responsive to determining that the user is in a vehicle.

43. The method according to claim 41 and further comprising illuminating at least one light adjacent to the machine to illuminate an area observable by a user of the machine at the user interface thereof, responsive to at least one of sensing the user adjacent to the machine and receiving at least one input through the at least one input device.